

Patent
Application No. 10/779,641
Attorney's Docket No. 000002-002

In re Patent Application of

MAIL STOP Appeal Brief

Theodore R. Zeigler

Reissue Application No. 10/779,641

Group Art Unit: 3635

Filed: February 18, 2004

Examiner: Bartosik, Anthony N.

For: EXPANDABLE AND COLLAPSIBLE
STRUCTURES INCLUDING SPLIT
SCISSOR ASSEMBLY

Confirmation No. 9084

APPEAL BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The applicant appeals the final rejection as follows.

I. REAL PARTY IN INTEREST

The real party in interest is the assignee, World Shelters, Inc.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences.

III. STATUS OF CLAIMS

All of the claims, claims 1-16 and 18-25, have been finally rejected. The final rejection of all claims is being appealed.

IV. STATUS OF AMENDMENTS

No amendments were filed after the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

According to an aspect of the present invention as claimed in claim 1, an expandable and collapsible (split) scissor assembly 21 for an expandable and collapsible structure 23 is seen in FIG. 1. (Page 6, lines 19-20; paragraph [0020]) The split scissor assembly 21 is shown isolated in FIGS. 2A and 2B (reproduced here).

The split scissor assembly 21 includes a first strut 25 having a first end 25' and a second end 25". (Page 6, lines 22-23; Paragraph [0021]) The split scissor assembly 21 also includes a second strut upper portion 27 having a first end 27' and a second end 27". (Page 6, line 23, to Page 7, line 1; Paragraph [0021]) The first end 27' of the second strut upper portion 27 is pivotably connected to the first strut 25 at an upper strut connection point 29. (Page 7, lines 1-3; Paragraph [0021])

The split scissor assembly 21 also includes a second strut lower portion 31 having a first end 31' and a second end 31". (Page 7, lines 5-6; Paragraph [0022]) The second end 31" of the second strut lower portion 31 is pivotably connected to the first strut 27 at a lower strut connection point 33. (Page 7, lines 6-7; Paragraph

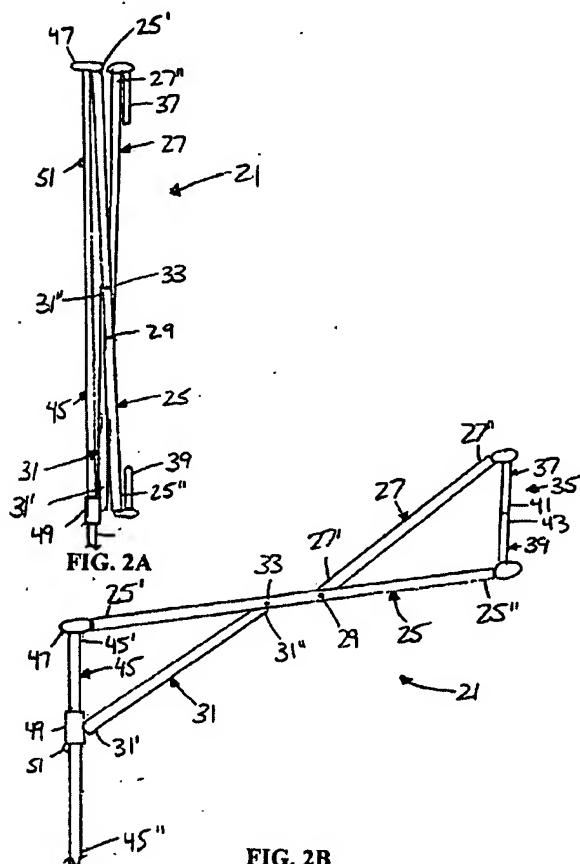


FIG. 2B

[0022]) The lower strut connection point 33 is between the upper strut connection point 29 and the first end 27' of the first strut 27. (Page 7, lines 8-9; Paragraph [0022])

The split scissor assembly 21 is movable between a folded position (FIG. 2A) in which the first end 25' of the first strut 25 and the second end 27" of the second strut upper portion 27 are substantially adjacent and the second end 25" of the first strut and the first end 31" of the second strut lower portion 31 are substantially adjacent, and an expanded position (FIG. 2B). (Page 7, lines 10-14; Paragraph [0023])

As claimed in claim 2, when the split scissor assembly 21 is in the expanded position, the first end 25' of the first strut 25 and the first end 31' of the second strut lower portion 31 are disposed proximate each other and the second end 25" of the first strut and the second end 27" of the second strut upper portion are disposed proximate each other. (Page 7, lines 14-18)

The application defines "proximate" as meaning that the strut ends are close but not necessarily adjacent to one another and is meant to contrast with the situation where the strut ends are particularly remote. (Page 7, lines 18-20; Paragraph [0023]) For example, when the split scissor assembly 21 is in the folded position, the first end 25' of the first strut 25 is at substantially the opposite end of the assembly from the first end 31' of the second strut lower portion 31 and those ends are not proximate in the sense used here. (Page 7, lines 20-23; Paragraph [0023])

Independent claims 16 and 25 define expandable and collapsible structural modules including split scissor assemblies substantially as described above, and independent claim 21 defines an expandable and collapsible structure including split scissor assemblies substantially as described above.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Review is requested regarding the propriety of the rejections of:

- claims 1-10, 15, and 25 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,274,980 to *Zeigler* (*Zeigler* '980);
- claims 11-14 under 35 U.S.C. 103(a) as being unpatentable over *Zeigler* '980 in view of U.S. Patent Application Publication No. 2002/0189659 to *Carter*; and
- claims 16 and 18-24 under 35 U.S.C. 103(a) as being unpatentable over *Zeigler* '980 in view of U.S. Patent No. 6,141,934 to *Zeigler*.

All of the claims are submitted to stand or fall together.

VII. ARGUMENT

All of the claims recite language similar to that shown underlined in claim 1, below:

1. An expandable and collapsible scissor assembly for an expandable and collapsible structure, comprising:
 - a first strut having a first end and a second end;
 - a second strut upper portion having a first end and a second end, the first end of the second strut upper portion being pivotably connected to the first strut at an upper strut connection point; and
 - a second strut lower portion having a first end and a second end, the second end of the second strut lower portion being pivotably connected to the first strut at a lower strut connection point,
 - wherein the lower strut connection point is between the upper strut connection point and the first end of the first strut and the scissor assembly is movable between a folded position and an expanded position, wherein, when the scissor assembly is in the folded position, the first end of the first strut and the second end of the second strut upper portion are substantially adjacent and the second end of the first strut and the first end of the second strut lower portion are substantially adjacent.

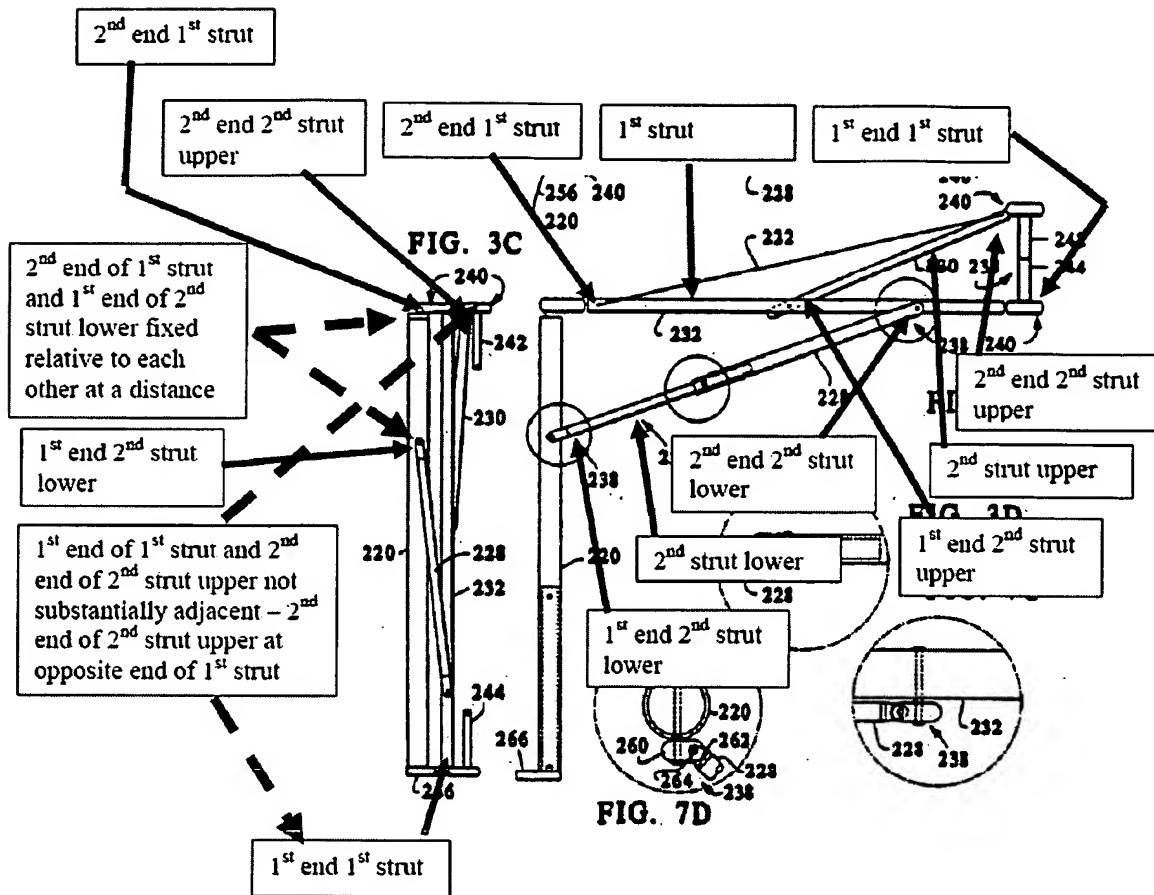
It is asserted at Page 16 of the final Official Action that the structures in the '980 patent alleged to correspond to the second end of the first strut (bottom end of strut 232 in FIG. 3C) and

the first end of the second strut lower portion (connection point of strut 228¹ to strut 220) are “substantially adjacent”.

A. *Zeigler '980 Does Not Disclose “Substantially Adjacent” Strut Ends as Claimed*

It is respectfully submitted that it is unreasonable to assert that the bottom end of strut 232 in FIG. 3C and the connection point of strut 228 to strut 220 are “substantially adjacent” and, therefore, there is no structure in *Zeigler '980* that satisfies the requirement of the claims that, “when the scissor assembly is in the folded position, the first end of the first strut and the second end of the second strut upper portion are substantially adjacent and the second end of the first strut and the first end of the second strut lower portion are substantially adjacent.” As can be seen from the annotated copies of FIGS. 3C and 7D of the '980 patent attached below, when the scissor assembly is in the folded position (FIG. 3C):

¹ The Official Action refers to reference number 224, which is the entire scissor assembly. Reference number 228 in *Zeigler '980* is the strut in question.



- the second end of the second strut upper portion is substantially adjacent the *second* end of the first strut at an *opposite end* of the first strut from the first end, i.e., not substantially adjacent the first end, and
- the second end of the first strut and the first end of the second strut lower portion are *fixed at a distance* to each other, i.e., not substantially adjacent.

B. "Substantially Adjacent" Excludes "At Opposite Ends of"

The present application provides a context for the expression "substantially adjacent", and it is not alleged that the claims are indefinite. In paragraph [0023], components of the embodiment illustrated in FIG. 2A in a folded condition are described as being "substantially adjacent" and components of the embodiment illustrated in FIG. 2B in an expanded condition are described as being "proximate". In paragraph [0023], proximate is defined as meaning that

the strut ends are *close but not necessarily adjacent* to one another and is meant to contrast with the situation where the strut ends are particularly remote. For example, when the split scissor assembly 21 is in the folded position, the first end 25' of the first strut 25 is at substantially the opposite end of the assembly from the first end 31' of the second strut lower portion 31 and those ends are not proximate in the sense used here. (emphasis added)

If "proximate" is defined as excluding "at opposite ends", then the term "adjacent", which is generally understood to suggest a closer relationship than "proximate" and which is used in a context in the quoted passage that indicates "adjacent" is closer than "proximate", also excludes "at opposite ends".

Even if one were to concede that "substantially adjacent" is an inexact term, under any conventional definition, and particularly in view of its use in the present application, "substantially adjacent" certainly excludes "at the opposite end of" and *Zeigler '980* does not disclose a structure wherein, in a folded condition, the first end of the first strut and the second end of the second strut upper portion are substantially adjacent.

Additionally, paragraph [0023] describes structures as being "proximate" each other where they are illustrated as being spaced at a distance in the expanded embodiment of FIG. 2B. Specifically, the first end 25' of the first strut 25 and the first end 31' of the second strut lower portion 31 are described as being "proximate". Paragraph [0023] distinguishes "proximate" as

being greater than "adjacent". In *Zeigler* '980 the only structures that could correspond to the second end of the first strut and the first end of the second strut lower portion are not substantially adjacent, rather, they are fixed at a distance to each other corresponding to a distance described in the present application as "proximate". Again, even if one were to concede that "substantially adjacent" is an inexact term, a structure that is proximate is not adjacent or substantially adjacent.

In view of at least the fact that there is no structure in *Zeigler* '980 that satisfies the requirement of the claims that, "when the scissor assembly is in the folded position, the first end of the first strut and the second end of the second strut upper portion are substantially adjacent and the second end of the first strut and the first end of the second strut lower portion are substantially adjacent", it is respectfully submitted that the claims are not anticipated by and define patentably over *Zeigler* '980. The secondary references do not cure the defects of *Zeigler* '980 with respect to at least the foregoing differences and it is submitted that the claims are not anticipated by and define patentably over *Zeigler* '980 in view of the secondary references, as well.

VIII. CONCLUSION

In view of the foregoing, it is respectfully requested that the final rejection of claims 1-16 and 18-25 be reversed, and that claims 1-16 and 18-25 be allowed.

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Date: June 5, 2008

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CLAIMS APPENDIX

1. An expandable and collapsible scissor assembly for an expandable and collapsible structure, comprising:
 - a first strut having a first end and a second end;
 - a second strut upper portion having a first end and a second end, the first end of the second strut upper portion being pivotably connected to the first strut at an upper strut connection point; and
 - a second strut lower portion having a first end and a second end, the second end of the second strut lower portion being pivotably connected to the first strut at a lower strut connection point,
wherein the lower strut connection point is between the upper strut connection point and the first end of the first strut and the scissor assembly is movable between a folded position and an expanded position, wherein, when the scissor assembly is in the folded position, the first end of the first strut and the second end of the second strut upper portion are substantially adjacent and the second end of the first strut and the first end of the second strut lower portion are substantially adjacent.

2. The expandable and collapsible scissor assembly as set forth in claim 1, wherein, when the scissor assembly is in the expanded position, the first end of the first strut and the first end of the second strut lower portion are disposed proximate each other and the second end of the first strut and the second end of the second strut upper portion are disposed proximate each other.

3. The expandable and collapsible scissor assembly as set forth in claim 2, further comprising a lock for locking at least one of the first end of the first strut and the first end of the second strut lower portion and the second end of the first strut and the second end of the second strut upper portion proximate each other when the scissor assembly is in the expanded position.

4. The expandable and collapsible scissor assembly as set forth in claim 3, wherein the lock includes an upper hub and a lower hub pivotably connected to the at least one of the first end of the first strut and the first end of the second strut lower portion and the second end of the first strut and the second end of the second strut upper portion.

5. The expandable and collapsible scissor assembly as set forth in claim 4, wherein the upper hub and the lower hub including mating members for securing the upper hub and the lower hub proximate each other.

6. The expandable and collapsible scissor assembly as set forth in claim 3, wherein the first end of the first strut and the first end of the second strut lower portion are locked by a first lock and the second end of the first strut and the second end of the second strut upper portion are locked by a second lock.

7. The expandable and collapsible scissor assembly as set forth in claim 6, wherein the first lock includes an upper hub and a lower hub pivotably connected to the first end of the first strut and the first end of the second strut lower portion, respectively and the second lock includes a lower hub and an upper hub pivotably connected to the second end of the first strut and the

second end of the second strut upper portion, respectively.

8. The expandable and collapsible scissor assembly as set forth in claim 7, wherein the upper hub and the lower hub for each of the first and second locks include mating members for securing the upper hub and the lower hub proximate each other.

9. The expandable and collapsible scissor assembly as set forth in claim 3, wherein the lock includes a lower hub and an upper hub pivotably connected to the second end of the first strut and the second end of the second strut upper portion, respectively.

10. The expandable and collapsible scissor assembly as set forth in claim 9, wherein the upper hub and the lower hub for each of the first and second locks include mating members for securing the upper hub and the lower hub proximate each other.

11. The expandable and collapsible scissor assembly as set forth in claim 9, comprising a leg having an upper end and a lower end, the first end of the first strut being pivotably connected to the upper end of the leg and the first end of the second strut lower portion being pivotably and slidably connected to the leg between the upper end and the lower end.

12. The expandable and collapsible scissor assembly as set forth in claim 11, comprising a leg lock for locking the first end of the second strut lower portion proximate the first end of the first strut.

13. The expandable and collapsible scissor assembly as set forth in claim 11, wherein the leg is telescopic, the upper end being disposed on a first portion of the leg and the lower end being disposed on a second portion of the leg at least partially receivable inside of the first portion of the leg.

14. The expandable and collapsible scissor assembly as set forth in claim 11, wherein, when the scissor assembly is in the expanded condition and the leg is vertical, the second end of the second strut upper portion is disposed vertically above the second end of the first strut.

15. The expandable and collapsible scissor assembly as set forth in claim 1, wherein, when the scissor assembly is in the expanded condition and the first end of the first strut is disposed vertically above the first end of the second strut lower portion, the second end of the second strut upper portion is disposed vertically above the second end of the first strut.

16. An expandable and collapsible structural module, comprising:
a left and a right split scissor assembly, each split scissor assembly including a first strut having a first end and a second end, a second strut upper portion having a first end and a second end, the first end of the second strut upper portion being pivotably connected to the first strut at an upper strut connection point, a second strut lower portion having a first end and a second end, the second end of the second strut lower portion being pivotably connected to the first strut at a lower strut connection point, wherein the lower strut connection point is between the upper strut connection point and the first end of the first strut; and

a front and a back scissor assembly, each scissor assembly including a first scissor strut

and a second scissor strut, the front and back first scissor struts each having a first end connected to the second end of the left second strut upper portion and the first end of the left first strut, respectively, and a second end connected to the second end of the right first strut and the first end of the right second strut lower portion, respectively, and the front and back second scissor struts each having a first end connected to the second end of the left first strut and the first end of the left second strut lower portion, respectively, and a second end connected to the second end of the right second strut upper portion and the first end of the right first strut, respectively;

wherein, for both the left and the right split scissor assembly, the split scissor assembly is movable between a split scissor folded position and a split scissor expanded position, wherein, when the split scissor assembly is in the split scissor folded position, the first end of the first strut and the second end of the second strut upper portion are substantially adjacent and the second end of the first strut and the first end of the second strut lower portion are substantially adjacent.

18. The expandable and collapsible structural module as set forth in claim 16, wherein, for both the front and the back scissor assembly, the scissor assembly is movable between a scissor folded position in which the first end of the first scissor strut and the second end of the second scissor strut are substantially adjacent and the second end of the first scissor strut and the first end of the second scissor strut are substantially adjacent, and a scissor expanded position.

19. The expandable and collapsible structural module as set forth in claim 16, wherein, for both the front and the back scissor assembly, the scissor assembly is movable between a scissor folded position in which the first end of the first scissor strut and the second end of the second scissor strut are substantially adjacent and the second end of the first scissor strut and the

first end of the second scissor strut are substantially adjacent, and a scissor expanded position.

20. The expandable and collapsible structural module as set forth in claim 16, wherein the first and second scissor struts are pivotably connected to each other.

21. An expandable and collapsible structure, comprising:
a plurality of expandable and collapsible structural modules, each module comprising a left and a right split scissor assembly, each split scissor assembly including a first strut having a first end and a second end, a second strut upper portion having a first end and a second end, the first end of the second strut upper portion being pivotably connected to the first strut at an upper strut connection point, a second strut lower portion having a first end and a second end, the second end of the second strut lower portion being pivotably connected to the first strut at a lower strut connection point, wherein the lower strut connection point is between the upper strut connection point and the first end of the first strut, a front and a back scissor assembly, each scissor assembly including a first scissor strut and a second scissor strut, the front and back first scissor struts each having a first end connected to the second end of the left second strut upper portion and the first end of the left first strut, respectively, and a second end connected to the second end of the right first strut and the first end of the right second strut lower portion, respectively, and the front and back second scissor struts each having a first end connected to the second end of the left first strut and the first end of the left second strut lower portion, respectively, and a second end connected to the second end of the right second strut upper portion and the first end of the right first strut,
wherein, for at least one pair of the modules, the modules are connected to one another in

that a second end of a second strut upper portion and a second end of a first strut of a left split scissor assembly of one module is connected to a second strut upper portion and a second end of a first strut of a right split scissor assembly of another module

wherein, for both the left and the right split scissor assembly, the split scissor assembly is movable between a split scissor folded position and a split scissor expanded position, wherein, when the split scissor assembly is in the split scissor folded position, the first end of the first strut and the second end of the second strut upper portion are substantially adjacent and the second end of the first strut and the first end of the second strut lower portion are substantially adjacent.

22. The expandable and collapsible structure as set forth in claim 21, wherein, for at least one pair of the modules, a left split scissor assembly of one module is a right split scissor assembly of another module.

23. The expandable and collapsible structure as set forth in claim 22, wherein, for at least one pair of the modules, the modules are connected to one another in that a front scissor of one module is a front scissor of another module.

24. The expandable and collapsible structure as set forth in claim 21, wherein, for at least one pair of the modules, the modules are connected to one another in that a front scissor of one module is a front scissor of another module.

25. An expandable and collapsible structural module, comprising:

a left and a front split scissor assembly, each split scissor assembly including a first strut having a first end and a second end, a second strut upper portion having a first end and a second end, the first end of the second strut upper portion being pivotably connected to the first strut at an upper strut connection point, a second strut lower portion having a first end and a second end, the second end of the second strut lower portion being pivotably connected to the first strut at a lower strut connection point, wherein the lower strut connection point is between the upper strut connection point and the first end of the first strut; and

a right and a back scissor assembly, each scissor assembly including a first scissor strut and a second scissor strut, the right and back first scissor struts each having a first end connected to the second end of the left second strut upper portion and the first end of the left first strut, respectively, and a second end connected to the second end of the front first strut and the first end of the front second strut lower portion, respectively, and the right and back second scissor struts each having a first end connected to the second end of the left first strut and the first end of the left second strut lower portion, respectively, and a second end connected to the second end of the front second strut upper portion and the first end of the front first strut,

wherein, for both the left and the front split scissor assembly, the split scissor assembly is movable between a split scissor folded position and a split scissor expanded position, wherein, when the split scissor assembly is in the split scissor folded position, the first end of the first strut and the second end of the second strut upper portion are substantially adjacent and the second end of the first strut and the first end of the second strut lower portion are substantially adjacent.

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EVIDENCE APPENDIX

None

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RELATED PROCEEDINGS APPENDIX

None